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NOTES, INFORMATION & NEWS

Lectotype Designations for Two East Asian Species of Assimineidae (Gastropoda: Rissooidea)

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The present authors are currently engaged in a revision of the Assimineidae (Fukuda & Ponder, in press; Suzukida & Fukuda, in press). There are many undescribed species in this family, and confusion surrounds the systematic position and definition of the various genera. The Assimineidae can thus be regarded as a "neglected group" (Fukuda & Ponder, in press; Suzukida & Fukuda, in press).

Assiminea Fleming, 1828, the type genus of the Assimineidae, inhabits marine, esturaine, freshwater, and terrestrial habitats with world-wide distribution (Böttger, 1887; Thiele, 1927, 1929; Wenz, 1939; Abbott, 1958), but one of the present authors (Fukuda, 1994; Fukuda & Mitoki, 1995, 1996a, b, 1997; Fukuda & Ponder, in press) has recently established that *Assiminea* as defined in previous taxonomy is polyphyletic. In Japan, more than 15 species have been assigned to *Assiminea* (Higo et al., 1999), but their systematic status remains obscure.

In order first to stabilize the definition of two species, lectotypes for "*A.*" *japonica* Martens, 1877, and "*A.*" *lutea* (A. Adams, 1861) are here selected. This represents the first step in the revision of Japanese assimineids.

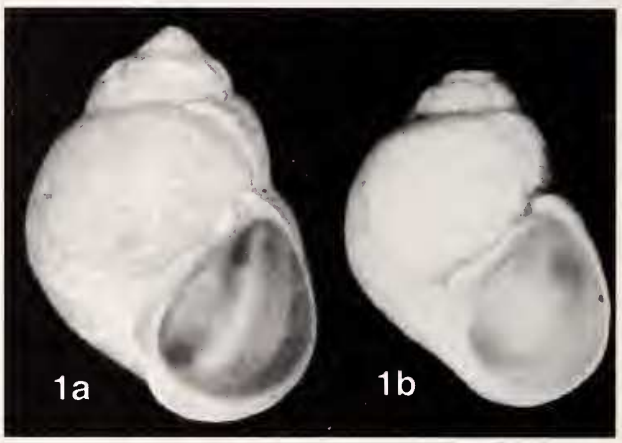

Figure 1. *Assiminea japonica* Martens, 1877. Shells. a. Lectotype of *A. japonica*. Yokohama (ZMB 26.705). b. Paralectotype of *A. japonica*. Yokohama (ZMB 102.672).

Assiminea japonica Martens, 1877, was described from "Yokohama" (Kanagawa Prefecture, the Pacific coast of central Honshu, Japan). Martens (1877) did not designate the holotype of this taxon in his original description. Later Fukuda (2000) illustrated one of Martens' (1877) syntypes. Although this species has since become extinct at the type locality because of destruction of the original

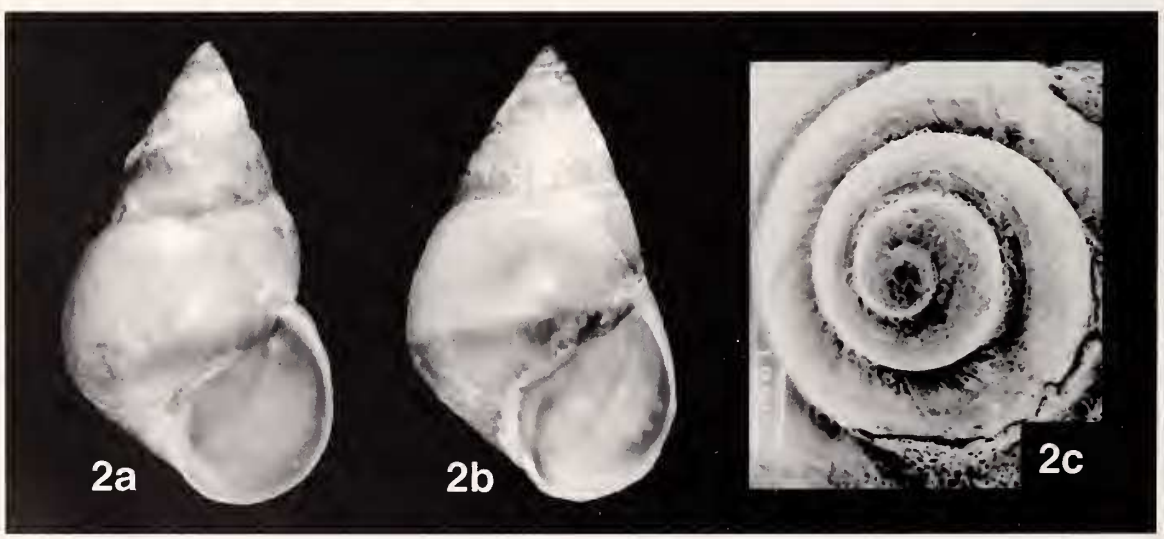

Figure 2. *Assiminea lutea* (A. Adams, 1861). Shells. a. Lectotype of *A. lutea*. Pei-ho (MV F 31359). b. Paralectotype of *A. lutea*. Pei-ho (MV F 96316). c. Protoconch of another paralectotype of *A. lutea*. Pei-ho (MV F 96316).

Table 1

Shell measurements (mm) for *Assiminea japonica* and *A. lutea.* Measurements (see Fukuda & Mitoki, 1995) consist of numbers of whorls (No. ws), shell length (L), shell width (W), length of body whorls (Lbw), length and width of penultimate whorl (Lpw, Wpw), length of last three whorls (Ll3ws), width of third whorl (W3w), length and width of protoconch (Lpc, Wpc), length and width of aperture (Lap, Wap), distance from base of body whorl to abapical end of aperture (x) and distance from edge of outer lip to edge of body whorl (y).

	Assiminea japonica		*Assiminea lutea*		
	Lectotype ZMB 26.705 (Figure 1a)	Paralectotype ZMB 102.672 (Figure 1b)	Lectotype F 31359 (Figure 2a)	Paralectotype 1 F 96316 (Figure 2b)	Paralectotype 2 F 96316 (Figure 2c)
No. ws	5.00	4.50	8.00	7.00	8.50
L	7.10	5.63	6.90	6.70	6.90
W	5.30	4.50	4.15	4.10	3.90
Lbw	5.70	4.90	4.80	4.80	4.60
Lpw	2.60	1.80	2.50	2.40	2.50
Wpw	3.40	2.45	2.93	2.85	2.85
Ll3Wws	7.00	5.63	6.25	6.18	6.20
W3w	1.80	1.40	2.00	2.00	2.00
Lap	4.20	3.60	3.23	3.30	3.00
Wap	3.45	2.90	2.70	2.60	2.50
Lpc	eroded	eroded	0.30	eroded	0.25
Wpc	eroded	eroded	0.40	eroded	0.45
x	1.00	0.90	0.55	0.60	0.60
y	0.68	0.55	0.38	0.45	0.50

environment (Kano & Goto, 1996), it is known to be one of the most abundant Japanese "*Assiminea*" (Fukuda, 1994; Suzukida & Fukuda, in press). It has also been reported from the Korean Peninsula, China, and the Maritime (Primoriye) Province of Russia (Habe, 1961, 1973; Habe & Kosuge, 1967; Kwon et al., 1993). However, Suzukida & Fukuda (in press) have established that at least 11 different species have been erroneously cited as "*A. japonica*" in previous literature. The present lectotype designation for *A. japonica* is thus necessary to enable the correct identification. Two syntypes of *A. japonica* deposited in the Institute of Systematic Zoology, Museum für Naturkunde, Berlin (ZMB 102.672 and ZMB 26.705) were examined. They are all of the syntypes which we have found. Both shells are globose and dark brown with a low spire. The larger specimen (7.10 mm in shell length; Figure 1a) is here designated as the lectotype. Measurements of these two specimens are shown in Table 1. The species identifiable with the lectotype of *A. japonica* is widely distributed from southern Hokkaido to southern Kyushu and lives around reed marshes on estuaries (Suzukida & Fukuda, in press).

Assiminia (sic) *lutea* A. Adams, 1861, was described from "the estuary of the Pei-ho." The description by A. Adams (1861) was quite short, and there was no illustration and no clear statement about type designation. The Pei-ho is now Baihe, Hebei, northern China according to Yen (1939) and Habe (1943), but further details (e.g., habitat) are not known. Habe (1943) stated that this species is distributed in northern and central China, Guangdong, Hong Kong, and Taiwan. Kuroda & Habe (1960) regarded *Assiminea japonica* as a subspecies of *A. lutea,* a view supported by several Japanese authors (e.g., Habe & Kosuge, 1967; Habe, 1973; Shinkawa, 1980; Fukuda, 1992). Three specimens from Pei-ho in the Adams collection of the National Museum of Victoria, Australia (MV F 31359 and F 96316) were recently examined. There are many of Adams' type specimens in the Museum (Boyd & Phillips, 1985) and the present specimens are among them. We have found only these specimens as the syntypes of *A. lutea.* These three specimens agree well with the original description in conchological characters. The specimen (Figure 2a) of 6.90 mm in shell length and 4.15 mm in shell width is here selected as the lectotype of *A. lutea* because the protoconch of one (Figure 2b) of the paralectotypes is eroded and another was gold-coated for SEM examination (Figure 2c). Measurements of these three specimens are shown in Table 1. These specimens have a far taller spire than *A. japonica,* far broader brown spiral bands, and a protoconch with distinct spiral ribs (Figure 2c). The protoconchs of *A. japonica* and the closely allied Japanese species lack sculpture. Based on the foregoing characters, *A. lutea* is clearly distinguishable from *A. japonica.*

Assiminea grayana Fleming, 1828, the type species of *Assiminea,* is quite different from "*A.*" *japonica* and "*A.*" *lutea* in protoconch sculpture (Fukuda, in preparation). The anatomy (e.g., reproductive, digestive, and nervous systems) is also different. We will establish the generic status of these two taxa in a future study.

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